

APPLICANT(S): BAGLIONI, Piero et al.  
SERIAL NO.: 10/509,107  
FILED: September 27, 2004  
Page 5

### REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

### Status of Claims

Claims 1-16 and 21-27 are pending in the application. Claims 1-7, 10-16 and 21-27 are rejected, and claims 8 and 9 have been allowed.

### Allowable Subject Matter

In the Office Action, the Examiner stated that claims 8 and 9 are allowed. However, Applicants note that claims 8 and 9 depend from claim 7, which has been rejected. Accordingly, Applicants presume that claims 8 and 9 are currently objected to but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicants appreciate the Examiner's indication of allowable subject matter and are prepared to amend claims 8 and 9 to place them in to condition for allowance but decline to do so at this point so as to strive for greater allowability of the pending claims.

### 35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 1-5 and 21-22 under 35 U.S.C. § 102(b) as being anticipated by pgs. 40 and 41 in "Zirconium and its Compounds" by Francis P. Venable. According to the Examiner, page 40 of Venable discloses that zirconium hydroxide can be made using an alkali hydroxide to precipitate it from a solution of zirconium salt, and that page 41 teaches that the calcination of zirconium hydroxide yields metal oxide.

Applicants point out that Venable is a book dated 1922(!) regarding zirconium compounds in general. Applicants note that the Examiner misleadingly quotes Venable on page 40 to teach that zirconium hydroxide can be made using an alkali hydroxide to

APPLICANT(S): BAGLIONI, Piero et al.  
SERIAL NO.: 10/509,107  
FILED: September 27, 2004  
Page 6

precipitate it from a solution of zirconium salt. In fact, Venable does state that zirconium hydroxide is prepared by precipitation from a solution of zirconium salts but explicitly states immediately afterwards that "when an alkali hydroxide is used it is almost impossible to wash the precipitate entirely free from the alkali". Moreover, Venable continues to say that "even when ammonia is used prolonged washing is necessary in order to secure the pure hydroxide" and that "the precipitated hydroxide is bulky and gelatinous, resembling aluminium hydroxide". Thereafter, Venable simply describes the efforts necessary in order to obtain the dry compound and the behavior of the oxide under further heating and clearly reports the impossibility of obtaining a pure compound.

It is well-settled that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). However, the Examiner has not alleged that all steps of the method of claim 1 are taught in Venable, as the Examiner does not allege where in Venable one of ordinary skill in the art could find any hint for the preparation of the nano-particles or micro-particles according to the present invention and how it should be evinced from Venable that the claimed compounds could be obtained (as pure compounds) by changing the conditions described in the document and the way the reaction conditions should be changed as claimed in order to obtain the wanted products.

Accordingly, Applicants respectfully assert that amended independent claim 1 is allowable. Claims 2-5 and 21-22 depend from, directly or indirectly, claim 1 and therefore include all the limitations of that claim. Therefore, Applicants respectfully assert that claims 2-5 and 21-22 are likewise allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections to amended independent claim 1 and to claims 2-5 and 21-22 that are dependent thereon.

### 35 U.S.C. § 103 Rejections

In the Office Action, the Examiner rejected claims 1-7, 10-11 and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Venable.

APPLICANT(S): BAGLIONI, Piero et al.  
SERIAL NO.: 10/509,107  
FILED: September 27, 2004  
Page 7

The Examiner also rejected claims 12-15 under 35 USC 103(a) as being unpatentable over Bielfeldt et al. (U.S. Patent No. 4,574,001) in view of Xiao et al. (U.S. Patent No. 6,162,530).

The Examiner further rejected claim 16 under 35 USC 103(a) as being unpatentable over Bielfeldt et al. in view of Xiao et al. and further in view Florio et al. (U.S. Patent No. 2,734,835)

The Examiner also rejected claims 23-27 under 35 USC 103(a) as being unpatentable over Florio et al. in view of Xiao et al.

Applicants respectfully traverse these rejections. As discussed above, however, the Examiner does not allege that Venable contains any suggestion or hint for the preparation of the nano-particles or micro-particles according to the present invention and how it should be evinced from Venable that the claimed compounds could be obtained (as pure compounds) by changing the conditions described in the document and the way the reaction conditions should be changed as claimed in order to obtain the wanted products.

An obviousness rejection requires a teaching or a suggestion by the relied upon prior art of all the elements of a claim (M.P.E.P. §2142). Since the Examiner does not suggest that Venable teaches or suggests all the elements of independent claim 1, the Examiner fails to establish a prima facie showing that Venable renders claim 1 obvious. Accordingly, claims 1-7, 10-11 and 21-22 are not obvious over Venable.

With respect to the rejection of claim 16 based upon Bielfeldt in view of Xiao, Bielfeldt describes a process for obtaining dispersions of metal oxides. As the Examiner himself acknowledges, there is no mention in Bielfeldt of particles having nano-dimensions. It must be underlined that the scope of Bielfeldt's invention is to provide dispersions of metal oxides in aluminium hydroxide. In other words, according to Bielfeldt, metal oxides particles are obtained by grinding larger particles and the latter covered by an aluminium hydroxide shell through the use of an aluminium hydroxide suspension. The Examiner considers it "obvious" to obtain nano-particles because Xiao says that nano-particles are useful and endowed of peculiar properties.

APPLICANT(S): BAGLIONI, Piero et al.  
SERIAL NO.: 10/509,107  
FILED: September 27, 2004  
Page 8

However, Xiao does not cure the deficiencies of Bielfeldt. If anything can be said, in view of the above, it is that in light of Xiao it would be "desirable" to obtain nano-particles. However, many things are in fact desirable but to make or obtain them is a totally different matter. Moreover, an invention is such exactly because it makes available things that are desirable (otherwise nobody would take the burden of making an invention).

With respect to the rejection of claims 12-15 based upon Bielfeldt in view of Xiao and Florio, Florio deals with a completely different problem from the other references and the offered solution is a "synthetic soil composition" (see col. 1, line 53 of Florio), which has nothing in common with the present nano-particles. In his work, Florio refers also to nanoparticles obtained by precipitation limiting the actual description to aluminum hydroxide and without giving any information about the characteristics of the other possible products.

An indirect, but very convincing, prove of the differences between the presently claimed invention for preparing the micro-particles or nano-particles and the method described by Florio is given by the fact that Florio's particles are described as useful in the paper and tissue industry (where their application is at room temperature) but no mention is made of their possible use in the ceramic field, where, as it is known, the materials are submitted to very high temperatures.

Therefore the same comments presented above in respect of Bielfeldt and Xiao apply also to Florio since also in this case the Examiner misuses the word "obvious" where "desirable" would be appropriate.

It is not seen how one of ordinary skill in the art, knowing from Florio that particles as those described are useful for reducing the color change of surfaces due to the pick-up and retention of powders and similar, should make or prepare the nano- or micro-particles which are pure oxides according to the presently claimed invention.

Applicants further note that, as it is clear from the description, the micro-particles according to the present application cannot be compared or confused with those described in the cited prior art. In fact, the micro-particles of the prior art are always the result of grinding or equivalent processes (i.e., they are obtained by making larger particles smaller), while the

APPLICANT(S): BAGLIONI, Piero et al.  
SERIAL NO.: 10/509,107  
FILED: September 27, 2004  
Page 9

presently claimed micro-particles are the result of the possible aggregation of the nano-particles obtained through the application process.

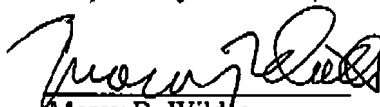
Applicants have added herein new claim 28 which is dependent upon claim 1 but which limits claim 1 to nano-dimension. This claim adds no new matter, and Applicants believe that this claim is patentable.

In view of the foregoing remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,



Morey B. Wildes  
Attorney/Agent for Applicant(s)  
Registration No. 36,968

Dated: August 6, 2007

**Pearl Cohen Zedek Latzer, LLP**  
1500 Broadway, 12th Floor  
New York, New York 10036  
Tel: (646) 878-0800  
Fax: (646) 878-0801